CJ 606-01 Research Methodology and Data Analysis

Winter 2016

Meeting: Monday 6:00 p.m. - 8:50 p.m.
Location: 205D DEV (classroom) & TBA (computer lab) – *Please meet in the classroom at 6:00pm every week, unless instructed to do otherwise.*

Instructor: Dr. Christopher A. Kierkus
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Telephone: 331-7132
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Texts: Babbie, E., et al. (2015). Adventures in Social Research: Data Analysis Using IBM SPSS Statistics, Ninth Edition. SAGE Publications, Inc.

Kraska, P. & W. Neuman (2011). Essential Criminal Justice and Criminology Research Methods. Prentice Hall.

+ Additional readings on Blackboard TBA (please check site weekly)!

Office Hours: 9:50 – 11:30 am Wednesday, Friday (Allendale, LOH 2nd or 3rd floor lounge).
Monday 4:15 – 6:00pm (DeVos 239C).

Evaluation: Mid-Term Exam (20%)
CITI Human Subjects Training (10%)
Participation (10%)
Data Analysis Homework (20%)
Research Project Proposal (Total of 40%: Prospectus, 5%; Literature Review Portion, 20%; Research Design Portion, 15%)

Introduction

This course examines basic and advanced concepts of criminal justice research. Students will become familiar with research techniques that are necessary for systematic analysis of the criminal justice system, offender behavior, crime trends and program effectiveness. Students will also learn to critically evaluate existing research.

Moreover, we will focus on data analysis techniques utilized in the discipline of criminal justice. Students will be exposed to selected quantitative data analysis tools, including computerized statistical software. The goal of this this part of the course is to develop each student's capacity for collecting, analyzing and interpreting data, as well as disseminating discipline specific research.

The class will guide students from problem selection, to research design, with practical suggestions based on a solid theoretical and empirical framework. Students will come to understand that research requires careful planning, and will begin to develop the necessary expertise to execute their own research projects effectively and professionally.

The practical goal of this class is to help prepare students to complete empirical Masters' theses, as well as to develop the ability to engage in original scholarly / applied research, as well as data driven decision making, as part of their future careers.

Upon completion of this course, the student will:

- Understand the history and different philosophies of social science research.
- Understand and critique various research methods utilized in criminal justice.
- Learn to conceptualize, organize, and produce a criminal justice thesis proposal (to include human subjects approval).
- Understand the relationships between research design and the various philosophical approaches to social science.
- Develop an appreciation for how and why criminal justice data is collected.
- Learn how to apply different methods of data collection to specific research problems.
- Understand why different methods of data analysis are appropriate to specific research questions.
- Learn how to analyze criminal justice data using appropriate tools.
- Learn how to interpret and draw conclusions from key types of analyses.
- Learn how to present and disseminate research findings to a professional or scholarly audience.
- Evidence verbal and written skills as outlined in course requirements.

Please note that this class is a continuous "work in progress". I've put together a schedule of topics, readings and due dates below (based on my experience with previous groups of research methods students); however, we may need to modify these as the course progresses. Moreover, perhaps more so than with any other class I teach, I would like to receive **continuous feedback** about what we're doing (as opposed to a summative evaluation at the end of the class). There's no sense waiting until the end of the course to tell me: "We didn't understand your presentation of that statistical technique" or "you spent three lectures discussing something that was covered in CJ 300."

With respect to Bloom's Taxonomy, this course will assume that you already possess rudimentary **knowledge** and **comprehension** of basic research methodology and data analysis skills (acquired in classes like STA 215 as well as CJ 300 and 400, or their equivalents). Although we will review this material at the beginning of each section, the majority of this class will focus on **applying** quantitative techniques to selected problems, as well as **analyzing, synthesizing** and **evaluating** quantitative data**.**

Bloom's Taxonomy of the Cognitive Domain*
(In other words, a level-by-level approach to understanding how you think!)

Benjamin Bloom created this taxonomy (organization of categories) to understand the level of abstract thinking required in various educational settings. *During the course of the semester, course content, exercises, assignments and tests will move through these levels from knowledge to analysis*. In other words, this class is structured to develop and test your critical thinking skills about the material. (Note that the taxonomy works from the bottom up. That is, the higher you go on the chart, the more developed the level of critical thinking.)

Bloom's Taxonomy

6. EVALUATION	Students can use previously learned standards/criteria to determine the worth or merit of a complex product.	Compare and discriminate between ideas, Assess value of theories, presentations, Make choices based on reasoned argument, Verify value of evidence, Recognize subjectivity	Assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, summarize
5. SYNTHESIS	Students can create an original and complex product out of a set of simpler components.	Use old ideas to create new ones, Generalize from given facts, Relate knowledge from several areas, Predict, draw conclusions	Combine, integrate, modify, rearrange, substitute, plan, create, build, solve, perform, establish, predict, produce, modify, plan, formulate, design, invent, compose, formulate, prepare, generalize, rewrite
4. ANALYSIS	Students can take a complex set of material and break it down into its component parts and/or explain why a complex set of relationships is organized as it is or what caused it to be or predict from the present to the future.	Seeing patterns, Organization of parts, Recognition of hidden meanings, Identification of components	Analyze, breakdown, separate, order, explain, connect, classify, arrange, divide, compare and contrast, select, explain, infer, show how, draw a diagram, deduce
3. APPLICATION	Students can apply previously learned material such as concepts, rules or generalizations to newly taught material.	Use information, Use methods, concepts, theories in new situations, Solve problems using required skills or knowledge	Apply, classify, find, choose, compute, sort, generalize, organize, demonstrate, calculate, complete, illustrate, show, solve, examine, modify, relate, change, classify, experiment, discover
2. COMPREHENSION	Students can express previously learned material in their own way.	Understanding information, Grasp meaning, Translate knowledge into new context, Interpret facts, Compare, Contrast, Order, Group, Infer causes, Predict consequences	Summarize, define, put in your own words, describe, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend, summarize, translate, illustrate, restate, demonstrate
1. KNOWLEDGE	Students can recall, reproduce or recognize previously learned information as it was taught to them.	Observation and recall of information, Knowledge of dates, events, places, Knowledge of major ideas Mastery of subject matter	List, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, underline, place in order, reproduce, recognize, recall, name, who, when, where, etc.
LEVEL	DESCRIPTION	GOAL	SUGGESTED ACTION VERBS/QUESTION CUES

· Adapted from Bloom, Benjamin S. 1984. *Taxonomy of educational objectives*. Boston, MA: Allyn and Bacon, Pearson Education

Course Expectations

Both the style of teaching and the method of evaluation used in this course will likely be different from what you experienced in your undergraduate classes. Most notably, there will be no final examination in CJ 606.

Moreover, the day-to-day routine of this class will be unlike a typical undergraduate course. It is **not** my intention to lecture for three hours each week. I will present lectures to introduce major topics; however, it is my intention to have **at least half** of our class time set aside for group work, learning to use computerized data analysis software, and other activities.

This is not the type of course where you can simply come to class, memorize what the Professor has said, and regurgitate it back on exams. The only way to effectively learn how to do research is to **actually do research**!

Hence, this will be the focus of our class. It is also not the type of class where your commitment to the course ends at 8:50 pm on the day our class is taught. **You should expect to devote at minimum of 10 hours per week to this course!**

Your formal grades in CJ 606 will be based on the following:

Mid Term Examination

After the research methods / conceptual part of the class there will be a formal, written mid-term examination. The exam will consist of both objective (true / false, multiple choice) and written essay style questions. It will account for 20% of your grade in CJ 606.

Participation

10% your grade in CJ 606 will be based on being present, and actively participating, while we work with SPSS in the statistics lab, and during other key exercises / activities throughout the semester.

CITI Human Subjects Training Course

Each student must complete the online CITI certification course for Human Subjects Review. The course can be found at: https://www.citiprogram.org/default.asp. Each student must print out and bring to class a copy of the confirmed completion page for the Group 2 (Social & Behavioral Investigators and Key Personnel) course. Please note: if you have already completed this in a previous class, then you may complete the Group 2 Refresher Course; however, **do not** select the Refresher Course (in Question 2 on Step 7) if you have not obtained CITI certification previously. Completing the certification will earn you 10% of your course grade.

Homework Assignments

I will be giving you two homework assignments during the statistics / data analysis part of the semester. Each assignment will be worth 10% of your grade. These assignments will enable you to practice utilizing quantitative data, as well as basic descriptive and inferential statistics. You **may** collaborate with your classmates to get these homework assignments done (in fact, I'd **encourage** you to do so; this is a valuable part of building a graduate student culture). **However,** this should **not** mean that one student completes the assignment and everyone else copies his / her work. If you do so, you may obtain full credit for the homework, but you won't acquire the necessary skills to do empirical, quantitative research (which means you'll be wasting your time taking this course).

Research Project Proposal

The most important graded component of this class (worth 40% of the grade in total) will be the research project proposal. The goal of this assignment will be to guide you through the process of selecting a topic, synthesizing a body of literature, formulating a hypothesis, finding data that could be used to test your hypothesis, and setting up an appropriate deductive analytical model. In effect, you will be conceptualizing, preparing, and writing, the "front end" of a formal scholarly research paper, or applied empirical study.

There will be three formal grading points for this project: first, I will be asking you to share a concept paper with me, outlining what topic you are interested in (this will be worth 5% of your course grade); second, I will ask you to turn in an abstract for your work, an introduction, and a formal literature review (this portion will count for 20% of your grade). Then finally, during our final exam slot, you will submit a methods section describing how you would conduct the analysis (worth 15% of the course grade). At this time, I will also ask you to turn in any revisions I've asked you to make to earlier components. Despite the fact that there are only three formal grading points, this does **not** mean that you should only think about this project in the few days before things come due. If you take that approach, you will likely regret it! This is the type of assignment on which we should be working together throughout the entire semester. You should be dropping by my office hours, exchanging ideas with me via e-mail, and/or talking to me during breaks in the class, on a continuous basis. My role in this class is to **mentor you** in becoming a professional researcher. It is difficult for me to do this if the only time I see you (and your work) is when it comes due.

The ultimate goal of this assignment is to teach you to prepare the first few steps of a research paper that could be presented at a major criminology / criminal justice conference. Or to write an evidence based technical report that would be of interest to a criminal justice agency. It is my hope that outstanding papers may eventually be presented at ASC / ACJS or even become journal article publications!

Final Grades

Grades for this course will be assigned according to the following grading scheme. The final date for withdrawing from the class without a grade being assigned is March 11, 2016 (by 5:00pm).

Letter	**A**	**A-**	**B+**	**B**	**B-**	**C+**	**C**	**F**
%	100	93	89	86	83	79	75	69
	94	90	87	84	80	76	70	0

Tentative Table of Topics and Assigned Readings
(*Please note: feel free to only skim parts of chapters pertaining to qualitative methods, we will not be focusing on this type of research in CJ 606*)

1. Introduction. January 11.

MLK DAY (No Class January 18th)

2. The philosophy of science: why we do research?: *Babbie et al. (2015), Chapter 1. Kraska and Neuman (2011), Chapters 1-3.* January 25.

3. Ethical issues in quantitative social research and the process of human subjects review. *Kraska and Neuman (2011), Chapter 4,* January 25.

4. Basic quantitative research concepts (hypotheses, variables, conceptualizations, operationalizations, scales of measurement, validity & reliability): *Babbie et al. (2015), Chapter 2. Kraska and Neuman (2011), Chapter 5. Chapter 6, 116-134.* February 1.

CITI Training Due (February 8)

5. Sampling. *Kraska and Neuman (2011), Chapter 6, 136-150.* February 8.

6. Reading and evaluating published scholarship and constructing a literature review. February 8.

7. Evaluation studies (experimental research designs and alternatives). *Kraska and Neuman (2011), Chapter 7.* February 15.

Project Prospectus Due February 22

8. Survey research. *Kraska and Neuman (2011), Chapter 8; Babbie et al. (2015), Chapter 21.* February 22.

9. Secondary data analysis. *Kraska and Neuman (2011), Chapter 9; Babbie et al. (2015); Chapter 22.* February 29.

10. Selecting an appropriate research design for your research question and understanding different kinds of social science data. *Kraska and Neuman (2011), Chapter 12.* February 29.

SPRING BREAK (No Class March 7!)

Mid-Term Exam, March 14.

11. Obtaining, collecting and preparing **quantitative** data for analysis (including an introduction to statistical data analysis software - SPSS). *Babbie et al. (2015), Chapter 4.* March 14.

Project Literature Review Due March 21.

12. Descriptive and Diagnostic Data Analysis. *Babbie et al. (2015), Chapters 5 – 8.* March 21.

13. Basic Inferential Statistics (e.g. Bivariate models including Chi-Squared, Z-tests, T-tests, ANOVA). *Babbie et al. (2015), Chapters 10 – 16.* March 21 – April 4.

SPSS Homework #1, April 4.

14. An Introduction to Intermediate Inferential Statistics (e.g. Multivariate models including Linear and Logistic Regression Analysis). *Babbie et al. (2015), Chapters 17 – 20,* April 11-18.

SPSS Homework #2, April 18.

15. Course wrap up. April 18.

FINAL PROJECT DESIGN DUE DATE (April 25, by 6 p.m.)

The preceding schedule describes the major topics that will be covered in the course, due dates for all the assignments, as well as the associated readings. You should read the assigned readings **prior** to coming to class

so that you can get the most out of the lectures and in-class activities that are scheduled on particular days. Then, if you don't understand something we worked on, you should re-read appropriate sections of the text and come discuss the issues with me during office hours. **Please note that I am asking you to do a lot of work in this class. I encourage you to get started early and pace yourself. Starting your assignments the day before they are due is a very bad idea:** not only will you likely receive poor grades, more importantly, you won't have time to "absorb" what you've learned (and hence won't be able to apply it your further studies and career)!

Helpful Hints

The success of this type of course depends on everyone coming to class and actively participating in all of the activities. Quite honestly, at this level of study, you should **want** to come to class and to work on your assignments / projects. After all, if you're not excited about your courses, why are you in graduate school?

If you miss a class you are **completely** responsible for the consequences of doing so: "I didn't know how to do the assignment because I couldn't make it to class on the day we worked on it" is **not** an acceptable excuse. If you know that you are going to be absent on a specific day please talk to me **as soon as possible** so that we can develop a plan to make up the missed work.

If you miss a due date, **a grade of "F"** will be assigned. The **only** excuse that I will except for a missed course requirement is one that is supported by appropriate documentation (ex: a letter from a physician).

All students are expected to behave thoughtfully and courteously while in class and to observe the university policy on academic integrity (see sections 223.00 and 223.01 of the Student Code). If you talk, use your cell phone, or engage in any other disruptive behavior while in class you will be asked to leave. If you plagiarize your assignments, or are caught cheating, a **grade of "F" will be assigned for the entire course**, I also reserve the right to initiate the formal grievance procedure against you which can result in your expulsion from the university.

If you are having trouble with the course please see me **right away**. The concepts and ideas presented in class build upon one another. Therefore, it is almost impossible to help a student with major problems the day before an assignment is due. Also, if you don't understand something that is being discussed, please ask me to clarify it. Don't think that you will look foolish by asking for clarification. Foolish people are the ones who pretend to understand when they really don't.

I am happy to meet with students during my office hours, and to set appointments to see you at other times. I am also happy to give advice via e-mail. However, please observe basic rules of courtesy when you seek help. These include:

1. Giving me enough time to respond to your inquiry: If you e-mail me a detailed question the night before an assignment is due, one that would require me to write a 10 page response, **do not** expect a reply. **Generally, please allow one full week prior to a due date for me to read a rough draft of an assignment / essay, and provide you with feedback**.
2. Introducing yourself properly in e-mails (and in person during the first few weeks of the class): I reserve the right not to reply to a question such as "Hey, when is the assignment due?" (With no

reference to which assignment or which course) from partydood@yahoo.com (The address is fictitious, but the example is not … I trust you get the idea).

3. Making every effort to make my scheduled office hours, and keeping appointments you make outside those hours: If you ask me to make a special trip out the university, and then fail to show up, I will **not** be happy!

If you have a need for disability-related accommodations, please inform me and the Office of Disability Support Services at 200 STU (331-2490). Reasonable and effective accommodations and services will be provided to students if the requests are made in a **timely manner**, with appropriate documentation in accordance with federal, state, and university guidelines.

When preparing your written assignments, I encourage all of you to make use of the **Fred Meijer Writing Center.** The center provides help with research and writing concerns, including paper organization, common writing mistakes, proper APA formatting, proofreading and editing, and other services. It also maintains a web-page: there you can find useful handouts and resources to assist you in your research and writing:

http://www.gvsu.edu/wc/

Finally, if you haven't already, I encourage you to get to know Ms. Patricia Bravender. She is the criminal justice librarian and she can provide you with individualized research assistance for all of your classes. Her office is in the Steelcase Library on the downtown campus and she can be reached at bravendp@gvsu.edu or 331-7338. Her criminal justice library subject guide (http://libguides.gvsu.edu/cj) contains links to all of the criminal justice databases and other specific resources for criminal justice students, including crime statistics.